

TECHNICAL DATA SHEET

Plexiglass (PMMA)

(Poly Methyl Methacrylate)

Plexiglass cast Acrylic Sheet is optically transparent, has good resistance to moisture and offers a high strength to weight ratio while providing light transmittance. Plexiglass sheets can be easily heat formed without loss of optical clarity. Prolonged exposure to moisture, or even total immersion in water, does not significantly effect the mechanical or optical properties of this the material. Acrylic Plexiglass sheet is produced in several formulations to provide specific physical properties required for various types of applications.

TYPICAL PROPERTIES of ACRYLIC PMMA		
ASTM or UL test	Property	Acrylic
PHYSICAL		
D792	Density (lb/in ³) (g/cm ³)	0.043 1.18
D570	Water Absorption, 24 hrs (%)	0.3
MECHANICAL		
D638	Tensile Strength (psi)	8,000 - 11,000
D638	Tensile Modulus (psi)	350,000 - 500,000
D638	Tensile Elongation at Break (%)	2
D790	Flexural Strength (psi)	12,000 - 17,000
D790	Flexural Modulus (psi)	350,000 - 500,000
D695	Compressive Strength (psi)	11,000 - 19,000
D695	Compressive Modulus (psi)	-
D785	Hardness, Rockwell	M80 - M100
D256	IZOD Notched Impact (ft-lb/in)	0.3
THERMAL		
D696	Coefficient of Linear Thermal Expansion (x 10 ⁻⁵ in./in./°F)	5 - 9
D648	Heat Deflection Temp (°F / °C) at 264 psi	150-210 / 65-100
D3418	Melting Temp (°F / °C)	265-285 / 130-140
-	Max Operating Temp (°F / °C)	150-200 / 65-93
C177	Thermal Conductivity (BTU-in/ft ² -hr-°F) (x 10 ⁻⁴ cal/cm-sec-°C)	3.9 1.2
UL94	Flammability Rating	-
ELECTRICAL		
D149	Dielectric Strength (V/mil) short time, 1/8" thick	400
D150	Dielectric Constant at 60 Hz	4.0
D150	Dissipation Factor at 60 Hz	0.05
OPTICAL		
-	Light Transmission, minimum (%)	92
-	Refractive Index	1.48-1.50

Benefits

Transparency
Breakage / Shatter Resistance
Weather Resistance
Heat formable
Light weight
Heat resistance (180-200 F)
Dimensional stability
*Chemical Resistance with exception

*It is attacked by the following chemicals:
Gasoline, chlorinated hydrocarbons such as methylene chloride. Also avoid arbon tetrachloride, turpentine, benzene, toluene, ethyl and methyl alcohol.

Applications

Medical
Consumer products
Automotive
Industrial

SHAPES AVAILABLE



ACRYLITE is a trademark of Cyro Industries.
PLEXIGLAS is a registered trademark of Altuglas International / Arkema.
LUCITE is a trademark of ICI Acrylics Inc.

NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Contact us for manufacturers' complete material property datasheets.
All values at 73°F (23°C) unless otherwise noted.